

**REMARKS**

This Application has been reviewed carefully in light of the Office Action mailed March 25, 2004 ("*Office Action*"). Claims 1-17 were pending in the Application and stand rejected. Applicants amend Claims 1, 2, 7, 8, 11, and 16. Applicants respectfully request reconsideration and favorable action in this case.

**Information Disclosure Statement Filed 11/6/2000**

The Examiner indicates that the Information Disclosure Statement ("IDS") filed on 11/6/2000 has not been considered. The Examiner states that the IDS "fails to comply with 37 CFR 1.98(a)(1), which requires 1449 list of all patents, publications, or other information submitted for consideration by the Office." *Office Action*, page 3.

Applicant respectfully submits that the IDS fully complied with 37 C.F.R. §§1.97 and 1.98 as those regulations existed on the date the IDS was filed. Furthermore, Applicant respectfully submits there is no requirement that cited documents be listed on Form PTO-1449. In this regard, the attention of the Examiner is respectfully directed to M.P.E.P. §609(III)(A)(1), which begins by stating that each IDS must include a "list" of all information submitted for consideration and ends by "encouraging" the use of Form PTO-1449 or some other similar form. Thus, there is a requirement for a list but not a requirement to use a Form PTO-1449. Applicant also respectfully directs the attention of the Examiner to M.P.E.P. §609(III)(C)(2), which specifically recognizes that Applicants are not required to use Form PTO-1449 by suggesting that Examiners "write 'all considered' and his or her initials to indicate that all citations have been considered" when "citations are submitted on a list other than on a form PTO-1449 or PTO/SB/08A and 08B."

Thus, Applicant respectfully requests the Examiner to review the IDS and provide Applicant with notice of such consideration as required by M.P.E.P. §609.

**Double Patenting Rejections**

The Examiner provisionally rejects Claims 1, 7, 11, and 16 under the judicially created doctrine of double patenting as being unpatentable over Claims 1 and 7 of copending U.S. Application No. 09/658,237. The Examiner also provisionally rejects Claims 1, 7, 11, and 16 under the judicially created doctrine of obviousness-type double patenting as being

unpatentable over Claims 1 and 7 of U.S. Application No. 09/658,237 in view of U.S. Patent No. 6,202,070, which issued to Nguyen, et al. Applicant respectfully submits that, if necessary and appropriate, Applicant stands ready to file a terminal disclaimer to overcome any non-provisional double-patenting rejection.

### **Drawing Objections**

The Examiner objects to the drawings under 37 C.F.R. §1.83(a). In particular, the Examiner contends that “predetermined function definitions,” “function portions,” “trigger,” “causing said data source to automatically transmit said trigger through a communications link,” and “responding to receipt of said trigger through said communications link by effecting said initiating of execution of said project definition” are not shown in the drawings. Applicant respectfully disagrees.

### **Predetermined Function Definitions**

As one example of a Figure showing predetermined function definitions, Applicant respectfully directs the Examiner’s attention to memory 452 and standard definitions 461 of Figure 9. As discussed in the specification at lines 14-22 of page 83:

Stored within the memory 452 are a plurality of standard definitions 461, including all of the definitions set forth in TABLES 1-4. The standard definitions at 461 include not only the executable object code for each definition, but also a separate file which contains the corresponding source code. In the disclosed embodiments, the source code for each standard definition is expressed in a language known as VISUAL BASIC, which was developed by Microsoft Corporation of Redmond, Washington.

Thus, Applicant respectfully submits that the drawings, without correction, do show at least one embodiment of predetermined function definitions.

### **Function Portions**

As one example of a Figure showing function portions, Applicant respectfully directs the Examiner’s attention to branch module 26 and action modules 31 and 32 of Figure 1. As discussed in the specification at lines 3-21 of page 15:

The project definition 14 in FIGURE 1 is a simple example, but has been configured to show at least one example of each of the four types of modules that are recognized in the disclosed embodiments of the present invention. In other words, the disclosed embodiments of the present invention recognize source modules, one example of which appears at 21, branch modules, one example of which appears at 26, action modules, two examples of which appear at 31 and 32, and destination modules, two examples of which appear at 37 and 38. As reflected by the brackets along the bottom of FIGURE 1, branch modules and action modules are sometimes referred to collectively herein as function modules. Source modules deal with the question of where to find the data to be processed, branch modules deal with the question of which data should and should not be processed in a specified manner, action modules deal with the question of what processing should be performed on the data, and destination modules deal with the question of where to put the processed data.

Thus, Applicant respectfully submits that the drawings, without correction, do show at least one embodiment of function portions.

### **Trigger**

As one example of a Figure showing a trigger, Applicant respectfully directs the Examiner's attention to request queue 296 of Figure 9. As discussed in the specification from line 30 of page 71 to line 24 of page 72:

The memory 278 also stores a request queue 296. Execution of one of the project definitions 286 is initiated in response to receipt by the process server 212 of a request. Such a request may arrive through the intranet 206 and/or Internet 208, for example from a user at one of the workstations 211 and 226. When the request arrives, the request is temporarily placed in the queue 296, which implements a first-in, first-out stack. Typically, the request will identify one of the project definitions stored at 286 in one of the sets of user data 281-284. Alternatively, however, the request may be accompanied by a project definition and any custom definitions used by that project definition, which are then temporarily stored in the user data 281 for that user, until execution of that project definition has been completed.

Requests for the queue 296 may also originate in some other manner. For example, assume that a given project definition stored in one of the portions 286 of the memory 278 processes data from the database 227. The database 227 may

include a script or other intelligence which, in response to a change to the pertinent source data in the database 227, automatically generates and sends to the process server 212 a request for execution of the given project definition, so that the modified data will be automatically processed. According to a feature of the invention, each request sent from any source to the process server 212 is expressed in a public communication protocol, which in the disclosed embodiments is the XML protocol.

Thus, Applicant respectfully submits that the drawings, without correction, do show at least one embodiment of a trigger.

**Causing Said Data Source to Automatically Transmit Said Trigger Through a Communications Link**

As one example of a Figure showing “causing said data source to automatically transmit said trigger through a communications link,” Applicant respectfully directs the Examiner’s attention to request queue 296 of Figure 9. As discussed in the specification from line 30 of page 71 to line 24 of page 72:

The memory 278 also stores a request queue 296. Execution of one of the project definitions 286 is initiated in response to receipt by the process server 212 of a request. Such a request may arrive through the intranet 206 and/or Internet 208, for example from a user at one of the workstations 211 and 226. When the request arrives, the request is temporarily placed in the queue 296, which implements a first-in, first-out stack. Typically, the request will identify one of the project definitions stored at 286 in one of the sets of user data 281-284. Alternatively, however, the request may be accompanied by a project definition and any custom definitions used by that project definition, which are then temporarily stored in the user data 281 for that user, until execution of that project definition has been completed.

Requests for the queue 296 may also originate in some other manner. For example, assume that a given project definition stored in one of the portions 286 of the memory 278 processes data from the database 227. The database 227 may include a script or other intelligence which, in response to a change to the pertinent source data in the database 227, automatically generates and sends to the process server 212 a request for execution of the given project definition, so that the modified data will be automatically processed. According to a

feature of the invention, each request sent from any source to the process server 212 is expressed in a public communication protocol, which in the disclosed embodiments is the XML protocol.

Thus, Applicant respectfully submits that the drawings, without correction, do show at least one embodiment of “causing said data source to automatically transmit said trigger through a communications link.”

**Responding to Receipt of Said Trigger Through Said Communications Link By Effecting Said Initiating of Execution of Said Project Definition**

As one example of a Figure showing “responding to receipt of said trigger through said communications link by effecting said initiating of execution of said project definition,” Applicant respectfully directs the Examiner’s attention to Figure 11. As discussed in the specification from line 17 of page 74 to line 20 of page 77:

FIGURE 11 is a flowchart showing a portion of the operation of the load balancing module 309, and in particular deals with how tasks corresponding to the requests in the queue 296 are allocated among the imaging servers 221-223. At block 361, the processor 277 checks to see whether the queue 296 is empty. If it is empty, then the processor waits at block 361 until there is at least one request in the queue. Of course, the activity depicted in FIGURE 11 will typically be carried out on a time sliced basis, such that the processor 277 will be simultaneously executing other routines in parallel with the loop shown in FIGURE 11, including the routine shown in FIGURE 10.

When it is determined at block 261 that the queue 296 includes at least one request, then control proceeds from block 361 to block 362. In block 362, the processor 277 retrieves from the queue 296 the request which has been in the queue the longest. Then, at block 363, the load balancing module 309 in the processor 277 interacts with the imaging servers 221-223 through the watchdogs 306-308 and the intranet 206, in order to determine the extent to which each has available capacity for additional work. If none of them has any significant amount of available capacity, then at block 366 control is returned to block 363, in order to continue to evaluate availability of the processors in the imaging servers, until it is determined at block 366 that at least one of the imaging servers 221-223 has some available processing capability.

Control then proceeds from block 366 to block 367, where the load balancing module 309 evaluates the project definition 286 associated with the request which was retrieved from the queue at block 362. This evaluation may include inspection not only of the project definition itself, but also some of the data which is slated to be processed by that project definition. The evaluated characteristics may include the complexity of the project definition, and also the type and amount of data which that project definition is slated to process. For example, in the case of image data, the amount of image data depends on both the number of images and also the size of the images.

Control then proceeds to block 368, where the evaluations made in block 363 and 367 are used to determine whether it is possible to launch execution the project definition which is identified by the request drawn from the queue at 362. In this regard, there are several different ways in which a given project definition can be launched. First, if one of the imaging servers 221-223 has a level of availability which will permit it to take on execution of the project definition in question, execution of the project definition can be launched on that imaging server alone. However, if the project definition itself is relatively complex, and/or if there is a relatively large amount of data which it must process, two or more instances of the project definition may be launched, each configured to process a respective mutually exclusive portion of the specified data. A decision needs to be made as to whether to launch them on the same processor or on different processors.

In more detail, where it appears that two or more instances of the same project definition should be launched, the load balancing server must also factor in the available capacity of the imaging servers 221-223. Assuming that there is a satisfactory level of capacity in the imaging servers, each instance of the given project definition will typically be launched on a respective different one of the imaging servers 221-223. However, where one of the imaging servers 221-223 has significant capacity, it is possible that two or more instances of the same project definition could be launched on the same processor, if it appeared that the project definition and associated data were such that both instances could be efficiently processed at the same time. In this regard, and as noted above, there will be points in time when the execution of a project definition is temporarily idle, for example because it is waiting for data to arrive through a network, or because it includes an Interactive module (TABLE 2) and is waiting for a user response. When one instance of the project definition is idle, the other instance(s) can be active, as a result of which it is

possible for a single processor to more quickly execute two instances of the same project definition handling respective portion of the data than to execute a single instance handling all the data.

If it is determined at block 368 that there is an appropriate way to launch the project definition in question, control proceeds from block 368 to block 371, where the project definition is launched in the form of one or more instances on one or more imaging servers. Each such instance is launched by having the load balancing module 309 configure a task of the type shown at 251 or 252 (FIGURE 9), including the project definition at 256, and including at 257 any executables that correspond to any custom definitions which are used in that project definition. Control then proceeds from block 371 to block 372, where the load balancing module 309 provides to one or more of the watchdogs 306-308, as appropriate, information regarding the instance(s) of the project definition which have just been launched, and which the watchdog(s) will need to monitor. In this regard, the watchdogs 306-308 will already be running, but are initialized with information specific to the new project definition, so that each watchdog monitoring an imaging server that is executing an instance of the project definition will be fully aware of all project definitions that are being executed by that imaging server. From block 372, control returns to block 361, to handle the next successive request in the queue.

Thus, Applicant respectfully submits that the drawings, without correction, do show at least one embodiment of “responding to receipt of said trigger through said communications link by effecting said initiating of execution of said project definition.”

For at least all of these reasons, Applicant respectfully requests the Examiner to reconsider and withdraw the objections to the drawings.

**Claim Rejections – 35 U.S.C. §112, first paragraph**

The Examiner rejects various claims under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. In particular, the Examiner contends that “predetermined function definitions,” “a plurality of function portions,” and “trigger” are not described in the specification in such a way as to enable one skilled in the art to make and use the invention. Applicant respectfully disagrees.

**Predetermined Function Definitions**

Applicant respectfully submits that the specification describes predetermined function definitions in such a way as to enable one skilled in the art to make and use the invention. The specification includes numerous descriptions of predetermined function definitions. For example, Tables 2 and 3, titled “Branching Definitions” and “Action Definitions” respectively, describe examples of predetermined function definitions at pages 23-41. Besides providing summaries of functions, these tables provide details such as names, ports, types, and descriptions of variables used by the functions. Applicant respectfully submits this description of predetermined function definitions would enable one skilled in the art to make and use at least one embodiment of the invention as claimed.

For at least these reasons, Applicant respectfully requests the Examiner to reconsider and withdraw the §112, first paragraph rejection of the Claims 1, 7, 11, and 16.

**A Plurality of Function Portions**

Applicant respectfully submits that the specification describes a plurality of function portions in such a way as to enable one skilled in the art to make and use the invention. The specification includes numerous descriptions of function portions. For example, at lines 19-26 of page 45, the specification describes action modules 73 and 74 of Figure 6, which represent two examples of function portions:

The action module 73 is a Fill module, which adds color to an active object of the image, and then outputs at 78 the modified image data. The action module 74 is a Text Stamper module, which superimposes onto the image data received at 78 the text string received at 79. As noted above, this text string represents a price. The text will be added as a new and further object in the image data, which thereafter becomes the active object.

Furthermore, the discussions associated with Figures 8, 14, 15, and 16 further describe other examples of function portions. Applicant respectfully submits that these descriptions of function portions would enable one skilled in the art to make and use at least one embodiment of the invention as claimed.

For at least these reasons, Applicant respectfully requests the Examiner to reconsider and withdraw the §112, first paragraph rejection of the Claims 1, 7, 11, and 16.



**Trigger**

Applicant respectfully submits that the specification describes a trigger in such a way as to enable one skilled in the art to make and use the invention. The specification includes numerous descriptions of triggers. For example, the specification, at lines 3-20 of page 101, summarizes ways to trigger the execution of a project definition:

The present invention provides a number of technical advantages. One such technical advantage results from the provision of the capability to trigger the execution of a project definition in various ways. One such capability is effective where an update is made to source data that is processed by the project definition, and involves automatic triggering of execution of the project definition. Another such capability is effective where execution of the project definition is triggered by receipt of a communication that is expressed in a public communication protocol, such as the eXtensible Markup Language (XML). These capabilities reduce or eliminate the need for human interaction to trigger execution of a project definition, and/or permit the execution of a project definition to be initiated from a remote location. Consequently, the functionality of project definitions according to the present invention is increased, while in many cases reducing or eliminating the possibility of human error.

The use of a communication to trigger execution of a project definition is discussed in other parts of the specification. For example, as discussed in the specification from line 30 of page 71 to line 24 of page 72:

The memory 278 also stores a request queue 296. Execution of one of the project definitions 286 is initiated in response to receipt by the process server 212 of a request. Such a request may arrive through the intranet 206 and/or Internet 208, for example from a user at one of the workstations 211 and 226. When the request arrives, the request is temporarily placed in the queue 296, which implements a first-in, first-out stack. Typically, the request will identify one of the project definitions stored at 286 in one of the sets of user data 281-284. Alternatively, however, the request may be accompanied by a project definition and any custom definitions used by that project definition, which are then temporarily stored in the user data 281 for that user, until execution of that project definition has been completed.

Requests for the queue 296 may also originate in some other manner. For example, assume that a given project definition stored in one of the portions 286 of the memory 278

processes data from the database 227. The database 227 may include a script or other intelligence which, in response to a change to the pertinent source data in the database 227, automatically generates and sends to the process server 212 a request for execution of the given project definition, so that the modified data will be automatically processed. According to a feature of the invention, each request sent from any source to the process server 212 is expressed in a public communication protocol, which in the disclosed embodiments is the XML protocol.

Applicant respectfully submits that these descriptions of a trigger would enable one skilled in the art to make and use at least one embodiment of the invention as claimed.

For at least these reasons, Applicant respectfully requests the Examiner to reconsider and withdraw the §112, first paragraph rejection of the Claims 2, 3, 8, 9, 10, 11, and 15-17.

**Claim Rejections – 35 U.S.C. §112, second paragraph**

The Examiner rejects Claims 2, 3, 8, 9, 10, 11, and 15-17 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner states that the term “trigger” is ambiguous as to the specific meaning of the word. Applicant respectfully disagrees.

Applicant submits that one of ordinary skill in the relevant art will understand Applicant’s use of the term “trigger.” The term trigger is included in various dictionaries. For example, one dictionary defines trigger as a “pulse or circuit that initiates the action of another component.” *The American Heritage College Dictionary*, 3rd Ed., 1997. Another dictionary defines trigger as an “application-specific process invoked by a database management system as a result of a request to add, change, delete, or retrieve a data element.” *Newton’s Telecom Dictionary*, 15th Edition, 1999. These definitions, while not limiting to the claimed element, evidence particular embodiments that would be readily apparent to one skilled in the art. Thus, one of ordinary skill in the art would understand Applicant’s use of the term “trigger.”

For at least these reasons, Applicant respectfully requests the Examiner to reconsider and withdraw the §112, second paragraph rejection of the Claims 2, 3, 8, 9, 10, 11, and 15-17.

**Claim Rejections – 35 U.S.C. §103**

The Examiner rejects Claims 1-17 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,654,795, which issued to Coile (“*Coile*”), in view of U.S. Patent No. 6,202,070, which issued to Nguyen, et al. (“*Nguyen*”). To establish obviousness of a claimed invention under §103, all claim limitations must be taught or suggested by the prior art. M.P.E.P. §2143.03.

Applicant’s independent Claim 1, as amended, recites:

A method, comprising the steps of:  
providing a set of predetermined function definitions which are different, at least one of said predetermined function definitions defining a function for manipulating image data;  
storing a project definition that is operable when executed to process said image data and includes: a plurality of function portions which each correspond to one of said function definitions in said set, and which each define at least one input port and at least one output port that are functionally related according to the corresponding function definition; a further portion which includes a source portion identifying a data source and defining an output port through which said image data from the data source can be produced, and which includes a destination portion identifying a data destination and defining an input port through which said image data can be supplied to the data destination; and binding information which includes binding portions that each associate a respective said input port with one of said output ports;  
displaying a project window that includes a graphical representation of said project definition;  
allowing a user to modify said project definition by interacting with said graphical representation using a pointing tool; and  
automatically initiating execution of said project definition in response to a change to said image data in said data source;  
wherein said execution of said project definition operates at least in part to manipulate a graphical aspect of said image data.

Applicant respectfully submits that *Coile*, alone or in combination with *Nguyen*, fails to teach or suggest every element of this Claim.

Among other aspects of Claim 1, the *Coile-Nguyen* combination fails to teach or suggest “displaying a project window that includes a graphical representation of said project definition.”

Furthermore, the *Coile-Nguyen* combination fails to teach or suggest “allowing a user to modify said project definition by interacting with said graphical representation using a pointing tool.”

In addition, the *Coile-Nguyen* combination fails to disclose “wherein said execution of said project definition operates at least in part to manipulate a graphical aspect of said image data.” Nowhere does *Coile* address the manipulation of a graphical aspect of image data. Instead, *Coile* states that “a second HTTP request would be generated for requesting and retrieving an image embedded within [a] page retrieved from an initial user triggered HTTP request.” *Coile*, Col. 1, lines 55-57. The requesting and retrieving of an image simply fails to teach or suggest “wherein said execution of the project definitions operates at least in part to manipulate a graphical aspect of said image data.” Furthermore, *Nguyen* addresses management of disk images during computer manufacturing. The management of disk images during computer manufacturing also fails to teach or suggest “wherein said execution of said project definition operates at least in part to manipulate a graphical aspect of said image data.”

The *Coile-Nguyen* combination also fails to teach or suggest the “project definition,” which includes:

a plurality of function portions which each correspond to one of said function definitions in said set, and which each define at least one input port and at least one output port that are functionally related according to the corresponding function definition; a further portion which includes a source portion identifying a data source and defining an output port through which said image data from the data source can be produced, and which includes a destination portion identifying a data destination and defining an input port through which said image data can be supplied to the data destination; and binding information which includes binding portions that each associate a respective said input port with one of said output ports.

The Examiner cites two sections of *Coile*, (1) Col. 1, lines 37-65; and (2) Col. 4, line 36-Col. 5, line 12, as disclosing elements of the project definition. However, the cited sections fail to

teach or suggest every element of the project definition, and the introduction of *Nguyen* fails to provide the missing elements.

For example, the Examiner fails to cite anything in *Coile* as teaching the “plurality of function portions.” The Examiner does refer to *Coile*’s discussion of “source and destination ports.” *Office Action*, page 7. However, the Examiner fails to provide any detail or explanation with regard to the rejection. Presumably the Examiner refers to the claimed “input port” and “output port” when citing the source and destination ports. Thus, the Examiner fails to cite any discussion in *Coile* regarding function portions. Moreover, Claim 1 further provides “automatically initiating execution of said project definition.” Applicant respectfully submits that the “source and destination ports” cannot be executed, as required by the claim language. Thus, these aspects of *Coile* fail to teach or suggest every element of the project definition claimed by Applicant. Furthermore, the introduction of *Nguyen* fails to provide the elements of the project definition claimed by Applicant that are not shown by *Coile*.

For analogous reasons as those discussed above, Applicant respectfully submits that *Coile* fails to disclose various aspects of independent Claims 7, 11, and 16. Claims 2-6, 8-10, 12-15, and 17 depend from Claims 1, 7, 11, and 16 respectively and therefore incorporate analogous elements shown above to be allowable. Thus, at least for reasons analogous to those discussed above, Applicant respectfully requests the Examiner to reconsider and withdraw the §103 rejection of Claims 1-17.

**CONCLUSION**

Applicant has made an earnest attempt to place the Application in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicant respectfully requests full allowance of all pending claims. If the Examiner feels that a telephone conference or an interview would advance prosecution of the Application in any manner, the undersigned attorney for Applicant stands ready to conduct such a conference at the convenience of the Examiner.

Although no fees are believed to be currently due, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of BAKER BOTTS L.L.P.

Respectfully submitted,

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